

APPENDIX K
Sample BMP Inspection and Maintenance Checklists

Wet Detention Pond BMP

Inspection/Corrective Maintenance Checklist

Inspection Item	Maint. Needed? (Yes/No)	Corrective Maintenance Activities	Comments (attach additional sheets, as necessary)
Drainage Area to Wet Extended Detention Pond			
Any areas where bare earth is exposed or scarce grass cover?		Reseed areas; take temporary measures to prevent erosion until vegetation is reestablished	
Inlets to storm drainage clear of debris?		Clear debris to preserve capacity	
Erosion Problems			
Check pond embankments for bare earth and eroded areas		Revegetate bare earth with strong rooted grasses (e.g. Kentucky 31 Fescue); repair eroded areas (see maintenance manual for details)	
Pipe undercut at inlet and outlet discharge areas?		Fill eroded areas with good compactable soil, overlay with filter fabric and rip rap	
Erosion downstream of pipe discharge areas?		Seed or sod eroded areas and protect with temporary erosion protection (e.g. excelsior matting, straw bales); if erosion persists may need rip rap lining	
Sediment Accumulation			
Noticeable sediment accumulation in forebay area?		Sediment should be removed from the forebay once 50% of its volume has been filled with sediment	
Check sediment in the main portion of the pond (once every 5 years)		Remove sediment when sediment exceeds design storage volume	
Functionality of Pond Outlets			
Check for blockage in low flow orifice(s), principal and emergency spillways		Remove blockage; if blockage persists, consider modifying trash guard	
Pond drain operational?		Periodically open and close the pond drain to keep it operational	
Pond Dam Safety			
New development downstream of the dam		Notify State Dam Safety Office if dam failure has the potential to cause significant property damage or loss of human life.	
Check the toe of the downstream dam embankment for "springs" or wet spots		The dam may have seepage problems. Contact the City SWS and a dam engineer immediately to inspect.	
For earthen dams, check embankments and crest for pronounced cracking or slope failures		Contact the City SWS and a dam engineer immediately to inspect.	
For concrete dams check both faces for pronounced cracks, joint leakage, and noticeable leaning or bulging		Contact the City SWS and a dam engineer immediately to inspect	

Bioretention BMP

Inspection/Corrective Maintenance Checklist

Inspection Item	Corrective Maint. Needed? (Yes/No)	Corrective Maintenance Activities	Comments (attach additional sheets, as necessary)
Drainage Area to Bioretention BMP			
Paved areas clear of debris and loose sediment?		Increase the frequency of paved area sweeping; check to ensure all areas are being swept	
Any areas where bare earth is exposed or scarce grass cover?		Reseed areas; take temporary measures to prevent erosion until vegetation is reestablished	
Area free of clippings from mowing and pruning?		Bag and remove clippings to prevent them from entering bioretention cell	
Inlets clear of debris?		Clear debris to preserve capacity	
Overall Bioretention Area			
Accumulated trash in bioretention area?		Remove trash; identify sources and take necessary actions to prevent trash from entering system	
Observe the draw down time of the cell. Is the draw down exceeding design draw down time (72 hours)?		Clean-out under drain system; remove and replace mulch and top few inches of planting soil or aerate soil; if appropriate draw down time cannot be restored entire filter may need replacing; consult with Storm Water Services; (see maintenance/inspection document for more details)	
Pretreatment			
Sediment build-up in energy dissipator? Rocks washed away?		Remove sediment build-up; if voids are full of sediment, remove, rinse and place back; if gravel is continually washed downstream, replace with larger size rock/gravel.	
Sediment build-up or blockage in sedimentation/diversion chamber?		Remove sediment build-up when it exceeds the design level (12 inches max); remove all debris in the chamber to prevent blockage of the outlets	
Erosion or bare areas on vegetative strip/channel?		Reseed or resod immediately to prevent excess sediment from entering cell	
Plantings			
Any plantings dead, diseased, not establishing?		Remove and replace – may need to change plant species if unable to establish – may need to test soil	
Weeding and pruning necessary?		Weed and prune as necessary to enhance the aesthetics of the bioretention cell	
Mulch layer			
Adequate mulch cover? Evenly spread over filter bed?		Replace mulch when the thickness diminishes due to decay; Make sure the mulch is spread evenly according to landscaping plan.	

Bioretention BMP (cont.)**Inspection/Corrective Maintenance Checklist**

Inspection Item	Corrective Maint. Needed? (Yes/No)	Corrective Maintenance Activities	Comments (attach additional sheets, as necessary)
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Planting soil			
Test pH of soil (annually)		Test pH of soil to ensure healthy plantings	
Test toxicity of soil (every five years)		Test toxicity of soil to ensure the bioretention cell remains effective and plantings will survive	
Outlet			
Is there discharge from under drain when water is ponded?		Bioretention is not functioning if this is the case. See above for corrective maintenance for nonfunctioning filter.	
Overflow clear of debris and functioning properly?		Remove debris; take corrective measures to restore working order of overflow outlet	
Downstream erosion?		Revegetate eroded areas; add rip rap with liner to the outlet area if erosion continues	

Sand Filtration BMP

Inspection/Corrective Maintenance Checklist

Inspection Item	Corrective Maint. Needed? (Yes/No)	Corrective Maintenance Activities	Comments (attach additional sheets, as necessary)
Drainage Area to Sand Filter BMP			
Paved areas clear of debris and loose sediment?		Increase the frequency of paved area sweeping; check to ensure all areas are being swept	
Any areas where bare earth is exposed or scarce grass cover?		Re-seed areas; take temporary measures to prevent erosion until vegetation is reestablished	
Area free of clippings from mowing and pruning?		Bag and remove clippings to prevent them from being washed into the sand filter	
Sedimentation Chamber			
Low flow orifice/bypass pipe clogged?		Unclog to restore sedimentation chamber draw down	
Sediment build-up less than design depth (12 inches)? (check every 6 months minimum)		Drain or pump out water (wet pool) removing and recycling any oil on the surface; remove sludge and dispose at landfill	
Accumulated trash?		Remove trash; identify sources and take necessary actions to prevent trash from entering system	
Inlets clear of debris?		Remove debris from inlets	
Structure in good condition? (check every 6 months minimum)		Repair – especially important for vehicle load bearing chambers	
Filtration Chamber			
Slow or stagnated water (no or very little filtration is occurring)? <u>Monitor the draw down time (every 6 months minimum)</u>		Replace the top layer of sand bed; clean-out under drain system; replace entire under drain system if an appropriate draw down can not be restored (see maintenance/inspection document for more details)	
Accumulated trash or oil on filter surface?		Remove trash; Identify source of pollutants and take necessary actions to prevent pollutants from entering system	
Structure in good condition? (check every 6 months minimum)		Repair – especially important for vehicle load bearing chambers	
Outlets			
Proper discharge from outlet (when water is in the filtration system)		See above for corrective actions needed for nonfunctional filters	
Downstream erosion?		Revegetate eroded areas; add rip rap with liner to the outlet area if erosion continues.	

